065 24W 03 CBA

Lower Wey GH: 42421

MONTANA WELL LOG REPORT

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. This form is to be completed by the driller and filed with MBMG within 60 days of completion of the work. Acquiring Water Rights is the well owner's responsibility and is not accomplished by the filing Well log information is stored in the Groundwater Information Center at the Montana Bureau of Mines and Geology (Butte) and water right Information is stored in the Water Rights Bureau records (Helena). For fields that are not applicable, enter NA. Cotton federative a travel recognition. Record additional information in the REMARKS section. Name Mr. Earl Drawdown is the amount water level is lowered below static level. All depth measurements shall be from the top of the well casing. Mailing address PC Box 2399 Time of recovery is hours/minutes since pumping stopped. Raucho Santa Fe, (A 92067 gpm with drill stem set at 2. WELL LOCATION: List 14 from smallest to largest Time of recovery hrs/min. Recovery water level Township & N. P. Range 24 F.W. County Carbon ton Tracifile Slootysprivane
Wer Ardress gpm with_ ft, of drawdown after ____ hours Time of recovery _ _hrs/min. Recovery water level_ GPS*** LIYOR II No OR Pump test* Death pump set for test gpm pump rate with ____ft. of drawdown after __ hrs pumping. Time of recovery _____ hrs/min. Recovery water level_ OR Flowing Artesian* 3. PROPOSED USE: □ Domestic ☐ Stock ☐ Public water supply . ☐ Monitoring Well ☐ Other; Flow controlled by _ 4. TYPE OF WORK: 'During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the austainable yield of the well. Sustainable yield does not include the resevoir of the well casing. Maw well Deepen existing well Debandon existing well Method: ☐ Cable ■ Rotary ☐ Other: 7. WELL LOG: 5. WELL CONSTRUCTION DETAILS: Depth, Feet Borehole: scriptor (example: blue/shate/hard. 22 " From in. from in, from Caelno 119 The aded 350 Steel: 83 Plastic: Pressure Rating lbs. [] Threaded [] Welded in. from Perforations/Slotted Pipe: Type of perforator used __ Size of perforations/stots no. of perforations/slots from ft. no. of perforations/slots from E# No RECEIVED Dia. Slot size from Slot size SEP 0 5 2006 Gravel Packed: - 1 Yes Size of grayel Gravel placed from ADDITIONAL SHEETS ATTACHED Packer: ☐ Yas .☐ No 8. DATE WELL COMPLETED: Grout: Material used 123 ft, OR Continuous feed 6. WELLTEST DATA: CEMENT PUMP KOND A well test is required for Modilis Jacq definis proventing report cover.) 10. DRILLER/CONTRACTOR'S CERTIFICATION: ☐ Static water level _ All work performed and reported in this well log is in compliance with the ___ft. below top of casing or

Montana Bureau of Mines & Geology The University of Montana 1300 West Park Street Butte, MT 59701

☐ Closed-in artesian pressure __ How was test flow measured:

bucket/stopwatch, welr, flume, flowmeter, eto___

Yellowstone Controlled Groundwater Area - Water, Temperature

☐ AQUIFER TEST DATA FORM ATTACHED

Montana well construction standards. This report is true to the best of my

Name, firm, or corporation (print) ROCHCIECK DA

Address 219 Gravity

Signature WM/

Date 7-17.06

MONTANA WELL LOG REPORT

Other Options

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is complied electronically from the contents of the Ground-Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

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Lower Well

Site Name: SHULTZ EARL

GWIC Id: 228278

Section 1: Well Owner

Owner Name SHULTZ EARL Mailing Address P.O. BOX 2394

City

RANCHO SANTE FE

State Zip Code 92067 CA

Township

06S

Section 2: Location Range

24E

Section 3

Quarter Sections NE¼ NW¼ SW¼ Geocode

County

CARBON

Latitude Longitude

Geomethod UNKNOWN

Datum

Altitude

Method

Date

Datum

Addition

Block

Lot

Section 3: Proposed Use of Water RRIGATION (1)

Section 4: Type of Work **Drilling Method: ROTARY**

Section 5: Well Completion Date Date well completed: Friday, July 07, 2006

Section 6: Well Construction Details

3orehole dimensions From To Diameter 37 22 120 18 131 12 660 Casing

From	То		Wall Thickness	Pressure Rating	Joint	Type
0	37	8	0.322		WELDED	STEEL
3	123	12	0.250		WELDED	STEEL
3	331	18	0.322		WELDED	STEEL

Completion (Perf/Screen)

			# of	Size of	
From	То	Diameter	Openings	Openings	Description
331	640	18			OPEN HOLE

Annular Space (Seal/Grout/Packer)

			Cont.
From	То	Description	Fed?
3	123	CEMENT	
3	331	CEMENT	

Section 7: Well Test Data

Total Depth: 331 Static Water Level: Water Temperature:

Unknown Test Method *

Yield _ gpm,

Pumping water level _ feet. Time of recovery _ hours. Recovery water level __feet.

* During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

Section 8: Remarks

Section 9: Well Log Geologic Source

Unassi	gned			
From	To	Description		
O	165	GREY CALCAREOUS CLAY AND SILTSTONE; INTERBEDDED WITH GREY LIMESTONE; ELLIS FORMATION		
165		165' TOP OF CHUGWATER FORMATION, RED FINE- GRAINED SANDSTONE, POORLY TO MODERATELY INDURATED; LOCALLY CALCAREOUS; INTERBEDDED WITH RED CLAY AND SILTSTONES, POORLY TO MODERATELY INDURATED. 300' FLOWING WATER		
510	545	RED SANDY SILTSTONE, MODERATELY INDURATED; GREY AND WHITE GYPSUM STRINGERS		
545	565	545' TOP OF ERVAY TONGUE PARK CITY FORMATION. GREY WITH MINOR AMOUNTS OF MAROON LIMESTONE		
565	640	565' TOP OF TENSLEEP FORMATION. BROWN TO TAN SANDSTONE, CALCAREOUS, POORLY TO MODERATELY INDURATED; 570' WATER FLOW VOLUME INCREASES. 635' WATER FLOW VOLUME INCREASES.		

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name:

Company: ROCK CREEK DRILLING INC

License No: WWC-300 Date Completed: 7/7/2006

065 24E 10 BAB MONTANA WELL LOG REPORT

Mar Liell		
upper Well	GL:	4321

This log reports the activities of a licensed Montana well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered. This form is to be completed by the driller and filed with DNRC within 60 days of completion of the work.

Acquiring Water Rights is the well owner's responsibility and is not accomplished by the filing of this report.

Well log Information is stored in the Groundwater Information Center at the Montana Bureau of Mines and Geology (Butte) and water right Information is stored in the Water Rights Bureau records (Helena).

Name Fart Shultz	Test - 1 hour minimum Drawdown is the amount water level is lowered below static level, All depth measurements shall be from the top of the well casing.
Mailing address P. O. B. 2374	Time of recovery is hours/minutes since numping stopped.
Rancho Santa C. Ca. 92067	Air test* gpm with drill stem set at ft. for hours
2. WELL LOCATION List 1/2 from smallest to largest	. Time of recoveryhrs/min. Recovery water level ft.
Township N. N.S. Sanson N. Section 10	OR Baller test*
Township A N/8 Range 4.6W County A Son Lot Trace Bik Subdivision Name Wall Address	gpm with ft. of drawdown after hours
Well Address	Time of recoveryhrs/min. Recovery water levelft.
CPS ' 디Yes 디No Lannude 나는 " ZO, '각국'' W Longhude (D& '내는 ZO그 W	OR Pump test* Depth pump set for test ft.
Error as reported by GPS locator (12 feet) 12 (13)	gpm pump rate withft. of drawdown after hrs pumping
Horizontal datum EI NAD27 ID WGS84	Time of recovery hrs/mln. Recovery water level ft.
3. PROPOSED USE: ☐ Domestic ☐ Stock ☐ Irrigation	OR Flowing Artesian*
☐ Public water supply ☐ Monitoring Well ☐ Other:	Flow controlled by VALVE
4. TYPE OF WORK:	
New well □ Deepen existing well □ Abandon existing well Method: □ Cable ▼Rotary □ Other:	During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the resevoir of the well easing.
5. WELL CONSTRUCTION DETAILS:	7. WELL LOG:
Borehole:	Depth, Feet Material: Color/sock and type/descriptor (example: blue/shale/hard,
Dia. 27 In. from — 4 ft. to 44 ft. Dia. 17 44 ft. to 124 ft. Dia. 37 In. from 444 ft. to 124 ft.	rom 10 or brown/gravel/water, or brown/sand/heaving)
Dia. 8 in from 1/24 ft. to 599 ft.	0 35 Gray Lin RECEIVED Form to
	135 105 Red Sandstone (35 top of Chagueta)
Steel: Wall thickness Threaded Welded	170 MIST GOD SONK tong Interpreties with
ODia. 18 In from -4 ft. to 44 ft.	red clay MAHMA lenses
O Dia. 12 In. from 4 ft, to 124 ft,	of grant white Gypsym
Plastic: Pressure Rating lbs. [] Threaded 5 Welded	water present but not flowing
Dia ft, to ft.	445 470 vaccos of Ecroy Tonghe Park (17 Fm)
Perforations/Slotted Pipe: Type of perforator used	470 557 White to tan sandstone, w/ far
Size of periorations/slotsin. byin.	557 562 White sandstone w/ gypsumlense
no. of perforations/slots from ft. to ft.	565' Top of Amsder Formation
no. of perforations/slots from ft. to ft.	562 670 White Tan & Gran Sandy Lingtone
Screens; 🗆 Yes 😕 No ,	670 675 Pele rellow Shale
Material Dia. Slot size from ft. to ft.	675 680 Red shale
Dia. Siqt size from tt. to ft.	680 855 White, tan, great point sandy innestone, Floring water
Gravel Packed: ☐ Yes YZINo	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Size of gravel	855 935 Gray Limestone, Flowing water
Gravel placed fromft. toft.	© ADDITIONAL SHEETS ATTACHED
Packer: Yes XNo TypeDepth(s)	8. DATE WELL COMPLETED: 4-9-04
Grout: Material used Cemeh	Casilya
Depth from 4 ft. to 4 ft. OR □ Continuous feed 6. WELL TEST DATA: 485	6 REMARKS: All Cefrent thung
A well test is required for all wells, (See details on well log report cover.)	
Static water level	All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my
How was lest flow measured:	Name, tirm, or corporation (print) Rock Cresk Diell
bucket/stopwatch, weir, flume, flowmeter, etc 2060.	Address RT 1 Pax 295 Wild M. COM
Yellowstone Controlled Groundwater Area - Water Temperature °F	Signature was kingly
☐ AQUIFER TEST DATA FORM ATTACHED	Date 4-19-04 . License no. 300
Contractor	A CONTRACT OF THE PARTY OF THE
Montana DNRC P.O. BOX 201601	HELENA, MT 59620-1601 444-6610

Geology and Water Resources of the Bluewater Springs Area Carbon County, Montana

By EVERETT A. ZIMMERMAN

CONTRIBUTIONS TO THE HYDROLOGY OF THE UNITED STATES ,

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1779-J

Prepared in cooperation with the U.S. Bureau of Sport Fisheries and Wildlife as part of a program of the Department of the Interior for the development of the Missouri River basin

